

WHAT IS CLAIMED IS:

1. An apparatus for acquiring image information using an array of an image acquisition units, each having an optical device, comprising:
 - 5 a geometric array of image acquisition units, each having an optical device generating an electrical signal depending on image intensity of a subject; and
 - an image signal output unit for receiving the electrical signal from the array and then generating a source electrical signal to process analog image.
- 10 2. The apparatus for acquiring image information according to claim 1, wherein the array of image acquisition units is changeable in accordance with a geometric shape of the subject.
- 15 3. The apparatus for acquiring image information according to claim 1, wherein the array of image acquisition units has a square, radial or circular shape, or combination thereof.
- 20 4. The apparatus for acquiring image information according to claim 1, wherein the image acquisition unit includes:
 - an image collection lens unit for first collecting image from the subject;
 - an optical fiber bundle for transmitting the image optical information collected from the image collection lens unit;
 - an image intermediating lens unit for intermediating the subject image transmitted through the optical fiber bundle to an image acquisition lens unit; and
 - 25 a light-receiving element for generating an electrical signal depending on intensity of the subject image acquired through the image acquisition lens unit.

5. The apparatus for acquiring image information according to claim 4,
wherein the image acquisition unit further includes an optical path arrangement
unit for keeping the image intermediating lens unit and the image acquisition lens unit
5 airtight from outer air and arranging optical paths of the image intermediating lens unit
and the image acquisition lens unit.

6. The apparatus for acquiring image information according to claim 4,
wherein the image acquisition unit further includes an installation unit having a
10 plurality of through holes so that an end of the image collection lens unit is inserted
therein to be exposed outward when the image acquisition unit is arranged in a
predetermined geometric shape.

7. The apparatus for acquiring image information according to claim 1,
15 further comprising:
an image information processing unit for generating analog image information by
processing the source electrical signal; and
an image information display unit for displaying the analog image information
generated through the image information processing unit.

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8. The apparatus for acquiring image information according to claim 1,
further comprising a light emitting unit having an optical device for supplementing
deficient light quantity.

25 9. The apparatus for acquiring image information according to claim 1,
further comprising an array of light emitting units, each having an optical device, which

supplements deficient light quantity and is arranged in a geometric shape.

10. The apparatus for acquiring image information according to claim 1,
wherein a program for calculating a value with respect to dimension of the subject
5 by using geometric location and dimension information of the image acquisition unit is
installed in the apparatus.

11. An apparatus for acquiring image information using an array of image
acquisition units, each having an optical device, comprising:
10 a plurality of image measurement terminal arrays including an image collection
lens unit for first collecting image from a subject and an optical fiber bundle for
transmitting image optical information collected from the image collection lens unit;
an optical switching unit for switching optical signals for a subject image
generated from a plurality of the arrays;
15 an array of image sensor units, each having an image intermediating lens unit for
intermediating the optical signal output via the optical switching unit to an image
acquisition unit and a light-receiving element for generating an electrical signal
depending on intensity of the subject image obtained from the image acquisition lens
unit; and
20 an image signal output unit for receiving the electrical signal generated from the
array of the image sensor unit and then outputting a source electrical signal to process
analog image.

12. The apparatus for acquiring image information according to claim 11,
25 wherein each of the image measurement terminal arrays is changeable in
accordance with a geometric shape of the subject.

13. The apparatus for acquiring image information according to claim 11,
wherein the image measurement terminals are arranged in a square, radial or
circular shape, or combination thereof.

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14. The apparatus for acquiring image information according to claim 11,
wherein each of the image sensor units includes an optical path arrangement unit
for keeping the image intermediating lens unit and the image acquisition lens unit airtight
from outer air and arranging optical paths of the image intermediating lens unit and the
10 image acquisition lens unit.

15. The apparatus for acquiring image information according to claim 11,
further comprising an installation unit having a plurality of through holes so that an end
of the image collection lens unit is inserted therein to be exposed outward when the
15 image measurement terminal is arranged in a predetermined geometric shape.

16. The apparatus for acquiring image information according to claim 11,
further comprising a light emitting unit having an optical device for supplementing
deficient light quantity.

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17. The apparatus for acquiring image information according to claim 11,
further comprising an array of light emitting units, each having an optical device, which
supplements deficient light quantity and is arranged in a geometric shape.

25 18. The apparatus for acquiring image information according to claim 11,
further comprising:

an image information processing unit for generating analog image information by processing the source electrical signal; and

an image information display unit for displaying the analog image information generated through the image information processing unit.

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19. The apparatus for acquiring image information according to claim 11, wherein a program for calculating a value with respect to dimension of the subject by using geometry location and dimension information of the image acquisition unit is installed in the apparatus.

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